

Environmental Hazards

SIT	<i>Peterson Puritan</i>
BREAK:	<i>11.9</i>
OTHER:	<i>OUT</i>

17322

Product

Armstrong Cork produces a wide variety of products related to floor and wall coverings for the commercial and residential markets. This includes primarily of the following:

- fabricated cork-based products (phased out of the production cycle in the late 1980s),
- linoleum-based resilient flooring

Hazards

Production of the above products can be generally divided into two classes of environmental hazard based on the following characteristics:

- cork-related contaminants: Once the cork reached the Pittsburgh facility, it was treated with a water-chemical mix that was presumably flushed into the river. In addition, residues (cork powder) were used in the production of thermal energy... namely heating the Armstrong Cork plant.

Treatment consisted of three (3) distinctive stages: boiling, washing and surface treatment, each requiring repeated immersions in water. Thus, the availability of large amounts of water (the Allegheny River) was necessary.

While Step 1 was a simple boiled water solution, Step 2 involved several repeated washes with either chlorinated lime and oxalic acid (sodium oxalate)... or peroxides and citric acid. The effective sterilization of cork (if used in the bottling industry) by application of chlorine requires the constant presence of a "chlorine residual" in which free chlorine remains in the water after a necessary period of contact. Chlorinating is often used in industries requiring treatment of water. In food-processing or bottle-washing plants related to breweries and soft-drink plants, chlorinating ensures a wholesome water supply and, by killing or controlling bacterial contamination, helps prevent spoilage. Although by itself chlorinated lime does not pose an environmental hazard, the combination of chlorinated lime and sodium oxalate used in the sterilization phase of cork processing may pose a hazard.

In order to decrease the frictional strength of the cork (make it easier to insert or extract the cork in a bottle), a final step required multiple "washes" of silicone oil and/or paraffin oil.

(Refer to earth1.epa.gov/enviro/html/emci/chemref/8012951.html)

- resilient flooring related contaminants: Asbestos is frequently found in floor tiles, linoleum, flooring felt, acoustical plaster and ceiling tiles manufactured by Armstrong since the early 1930s. These products are among those strictly regulated by the Environmental Protection Agency since the 1989 Asbestos Ban & Phase-Out Rule.

(Refer to www.epa.gov/reg5foia/asbestos/threat.html)

In addition, waste disposal consisting of scrap and refuse from incombustible mineral wool may pose as environmental hazard to ground and surface water. Traces of the following are evident but are not considered above acceptable EPA levels:

- Bromo-Dichloromethane (Refer to earth1.epa.gov/enviro/html/emci/chemref/75274.html)
- Chlorodibromomethane
- Chloroform

For a complete list of chemical contaminants tested on-site and relating to Armstrong Cork production, see Appendix III.

Environmental Impact Assessment

The primary pollutant associated with the Armstrong Cork facility concerns waste disposal.

There is little or minimal potential that the site could have an impact on groundwater or surface water due to its proximity to the Allegheny River. However, there are no records available to quantify or characterize on-site hazards.

APPENDIX III

- Trichloroethylene
- Carbon Tetrachloride
- 1,2-Dichloroethane
- Vinyl Chloride
- Benzene
- para-Dichlorobenzene
- 1,1-Dichloroethylene
- 1,1,1-Trichloroethane
- Bromobenzene
- Bromo-Dichloromethane
- Bromoform
- Bromoethane
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- Chloroform
- Chloromethane
- o-Chlorotoluene
- p-Chlorotoluene
- Dibromomethane
- m-Dichlorobenzene
- o-Dichlorobenzene
- 1,2- Dichloroethylene
- Dichloromethane
- 1,1-Dichloroethane
- 1,2-Dichloropropane
- 1,3-Dichloropropane
- 2,2-Dichloropropane
- Ethylbenzene

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- Styrene
- 1,1,2-Tetrachloroethane
- 1,2,3-Trichloropropane
- Toluene
- p-Xylene
- Ethylene Dibromide
- 1,2-Dibromo-3-Chloropropane

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